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## ABE LABORATORY (May 1943~June 1955)

Head: Dr. Kiyoshi Abe

and

## TANAKA LABORATORY (July 1955~March 1963)

Head: Dr. Tetsuro Tanaka

In 1943, the Abe Laboratory was established for the studies on electorical engineering materials under the director, Kiyoshi Abe, Professor of Faculty of Engineering at Kyoto University. In this laboratory, the research was carried out in the following 3 subjects.

- (1) High dielectric materials.
- (2) Semiconductor materials.
- (3) Organic compound materials.

In 1955, Professor Tetsuro Tanaka was appointed head of the laboratory after Professor Kiyoshi Abe has resigned at his retiring age. In the Tanaka Laboratory, the research was carried out in the following 4 subjects.

- (1) Ferroelectric ceramics.
- (2) Ferrite ceramics.
- (3) Semiconductor materials.
- (4) Radiation effect on electronics materials.

In 1963, Professor Tetsuro Tanaka was transferred from this Institue to the Faculty of Engineering of Kyoto University and his laboratory was abloished. Most of the works in the Tanaka Laboratory, were reported at the Joint Meeting of the Electrical Society of Japan (M.E.S.J.) and the Meeting of the Physical Society of Japan (M.P.S.J.).

### Publications

(\* indicates an article published in Japanese)

#### I. Ferroelectric Ceramics

1. K. Abe and T. Tanaka: Study on High Dielectric Constant Ceramics (III) Electrostrictive and Piezoelectric Effect of BaTiO<sub>3</sub> Ceramics. *Bull. Inst. Chem. Res., Kyoto Univ.*, **20**, 54 (1950).
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3. K. Abe and T. Tanaka: Study on High Dielectric Constant Ceramics (V) BaTiO<sub>3</sub> Cermacs for Condenser Materials. *ibid.*, **20**, 56 (1950).
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5. K. Abe and T. Tanaka: Study on High Dielectric Constant Ceramics (VI) Polarization of BaTiO<sub>3</sub> Ceramics. *Bull. Inst. Chem. Res., Kyoto Univ.*, **22**, 78 (1950).
6. K. Abe and T. Tanaka: Study on High Dielectric Constant Ceramics (VII) Electrical Resistance

- of BaTiO<sub>3</sub> Ceramics. *ibid.*, **22**, 79 (1950).
7. K. Abe and T. Tanaka: Study on High Dielectric Constant Ceramics (VIII) BaTiO<sub>3</sub> Single Crystal. *ibid.*, **24**, 64 (1951).
  8. K. Abe, T. Tanaka, A. Murata and S. Miura: Study on High Dielectric Constant Ceramics (IX) Application of Piezoelectricity of BaTiO<sub>3</sub> Ceramics for Phonograph Pick-up. *ibid.*, **24**, 64 (1951).
  9. K. Abe, T. Tanaka, S. Miura and K. Okazaki: Study on High Dielectric Constant Ceramics (X) BaTiO<sub>3</sub> Ceramics as the Electrostrictive Vibrator. *ibid.*, **26**, 72 (1951).
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  12. K. Abe, T. Tanaka and K. Uo: Study on High Dielectric Constant Ceramics. (XIII) Analytical Research on Coupled Vibration. *ibid.*, **29**, 71 (1952).
  13. K. Abe, T. Tanaka, S. Miura, I. Tsuda and A. Murata: Study on High Dielectric Constant Ceramics (XIV) Generation of Powerful Supersonic Wave using BaTiO<sub>3</sub> Ceramic Vibrator. *ibid.*, **29**, 73 (1952).
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  16. K. Abe, T. Tanaka and K. Uo: Study on High Dielectric Constant Ceramics (XVII) Coupled Vibrations in Electrostrictive Vibrators. *ibid.*, **31**, 208 (1953).
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  59. T. Tanaka: Extensional Vibration of Circular Arc Vibrator. *M.E.S.J.*, 53 Oct. (1957).\*
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## II. Ferrite Ceramics

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3. T. Tanaka and J. Yamamoto: Ni Ferrite as Magnetostrictive Materials. *M.E.S.J.*, 3P-32 Oct. (1955).\*
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6. T. Tanaka and J. Yamamoto: Ferrites and its Application. *Zairyo Shiken (Kyoto)*, **6**, 35 (1957).\*

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